

15 October 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Trip Report

DATE : 6 October 1964

PLACE :

ATTENDEES:

1. discussed the study of lenses designed with aspheric surfaces. The results of these studies to date has been quite discouraging. selected a basic lens problem -- a lense of the type used in rear projection systems. He started with a basic triplet with spherical elements and corrected and recomputed it to get the very best lens possible. Then he designed the very best four element lens using spherical surfaces. This unit was far superior to the three element lens. He now returned to the triplet and redesigned it using aspherical surfaces. The resulting triplet was superior to the previous triplet but did not approach the performance of the 4 element lens with spherical surfaces. Because of the high cost involved and difficulty of generating spherical surfaces it is certainly discouraging to receive such a small increase in performance for such a large increase in cost. It appears easier just to go to another lens element.

2. The results of attempt to generate aspheric surfaces through selective evaporation techniques have been very disappointing. An interim report is to be delivered very shortly. This entire project should be re-evaluated after a thorough investigation of this report.

3. We currently have a number of optical problems where we could benefit from advice. It appears reasonable to set up a meeting with in the near future. This meeting would be at NPIC and would cover current optical problems and possible changes in the direction of research currently underway.

Development Branch, P&DS